

CLAIMS

1. A method of operating a printing device that includes a printer engine for rendering data encoded in a raster form, said method comprising:

- receiving by short range wireless communication an intermediate data which includes image data corresponding to at least part of the content,
- extracting the image data from said intermediate data,
- converting the image data to data in a page description language form,
- converting the data in the page description language to the raster form rendered by the printer engine, and
- supplying the data in the raster form to the printer engine.

2. An output device for rendering content, said output device including:

- a communication unit to receive via short range wireless communication an intermediate output data in which includes at least part of the content encoded in image data form with a first bit depth and a first resolution, said intermediate output data including graphics or text elements exclusively encoded with image data,
- an interpreter for receiving the intermediate output data and retrieving said image data from said intermediate output data,
- a processor for carrying out at least one image processing operation on the interpreted data, said processing operation adjusting at least one of bit depth, color space and a combination of output size and resolution of the interpreted data, and
- an output engine for receiving data from said processor and employing the data received from the processor to render the content.

3. An output device according to claim 2, wherein the output device is a printer, the output engine is a printer engine, and the processor is an image processor, and the second bit depth is less than the first bit depth.

4. A method of outputting content encoded in image data having a first bit depth and a first resolution, the content including at least part of a text or graphics element, said method comprising:

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receiving an intermediate output data that include the say image data related to content,
interpreting the intermediate output data and retrieving said image data from the intermediate output data,
carrying out at least one processing operation on the interpreted image data, said processing operation adjusting at least one of bit depth, color space and a combination of output size and resolution of the interpreted data, and
employing the data generated by the processing operation to render the content.

5. In a data output device for rendering content managed with an information apparatus, the data output device including an output engine that imparts output on a medium in accordance with output data received at the output device, a communication unit that communicates with one or more devices, and a memory storage that stores data for rendering; the improvement comprising:

means for providing at least an indication related to one or more data formats acceptable to the controller in connection with rendering content at the output device; and

means for receiving an intermediate output data related to the content managed from the information apparatus, the intermediate output data corresponding to at least part of the content and includes data in accordance with said one or more acceptable data formats.

6. The controller as of claim 5 further comprising means for establishing a wireless communication channel with an information apparatus.

7. The output device as of claim 5 further comprising means for converting the intermediate output data into an output data that is acceptable for rendering with the output device.

8. The output device as of claim 6 including means for providing over the communication channel as said indication one or more of an output device identification, an intermediate output data indicator, a quality of service indicator, a price indicator, a status indicator, an output device attribute indicator, a rasterization parameter indicator, a format indicator, and a language indicator.

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9. The output device as of claim 6 further comprising means for providing over the communication channel an output device profile.

10. The output device as of claim 5 further including means for receiving intermediate output data that includes at least one output image corresponding to at least part of the content.

11. The output device as of claim 5 wherein the means for receiving an intermediate output data includes means for receiving the intermediate output data that includes data in accordance with MRC encoding.

12. The output device as of claim 11 further comprising means for performing at least one image processing operation on the output image; the image processing operation including one or more of a color correction operation, a color matching operation, a color space conversion, a color management operation, a scaling operation, an interpolation operation, and a halftoning operation.

13. The output device as of claim 5 further comprising means for conforming the intermediate output data into a print data that is acceptable to a printer controller associated with a printing device.

14. The output device of claim 5 in which the output medium is one or more of a substrate, a paper, a display screen, and a projector.

15. The output device of claim 5 in which the output device further comprises means for storing one or more output device profiles with one or more attributes corresponding to the output devices.

16. The output device of claim 5 further comprising means for receiving plural service requests from plural information apparatuses, the output device providing the at least part of the output device profile to each of the plural information apparatuses.

17. The output device of claim 5 in which the output device includes a printer.

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18. The output device of claim 5 in which the output device further includes means for implementing payment processing as compensation for rendering of the output content on the output device.

19. The output device of claim 5 in which the output device further includes means for implementing job management functionalities with one or more of data output job queuing and spooling.

20. The output device of claim 5 in which the output device further includes means for implementing a security procedure that limits access to the rendering provided by the selected output device.

21. The output device of claim 5 in which the output device further includes means for converting the output data content into a form compatible with the output engine.

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